Treatment planning for effective and efficient correction of Class II malocclusion

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Abstract
Objective: The approach of treatment of Class II malocclusion correction depends on several factors such as: the status and pattern of growth, severity of the malocclusion and patients cooperation. Because of the wide variation found in Class II malocclusions, many different diagnostic decisions weather to extract or not to extract, must be made and treatment mechanics must, of necessity, differ as well. This case reports describe the common diagnostic decisions and the different biomechanics regarding the teeth extractions in patients with Class II malocclusion as well as regarding the dimensions of denture: the anterior limit, the lateral and the vertical limit in patients with different skeletal pattern.
Case: The treatment of a Class II malocclusion in case 1 hyperdivergent patient, required extraction of maxillary first premolars to correct the increased overjet, proclined upper incisors, convex profile and skeletal Class II. Case 2 patient with hypodivergent skeletal pattern was treated with camouphlage treatment with maxillary premolar extraction for correction of the jaw relation, retracting the teeth in the extraction space and maintaning the lower incisors position, achiving Angle Class I in the canine region and Angle Class II in the molar region. Case 3 with normal pattern of growth was treated with second maxillary premolars extraction. Due to the fact that the patients were adults, treatment plan could not have included heagears and funtional appliances for Class II correction. In all three cases we did not flared the mandibular incisors in order to level the Curve of Spee or to eliminate crowding, due to the fact that their position is very critical.
Conclusion: The results included harmonic occlusal relationships with adequate positioning of the teeth in their bony bases and correction of skeletal disharmonies. We can conclude that accurate diagnosis and treatment planning following orthodontic extraction guidelines lead to a longterm stability. Any decision regarding the need for extraction of teeth during orthodontic therapy is not only dependent on the presence or absence of space in the dental arches. Other issues should be evaluated in order to achieve proper malocclusion correction, maintenance or improvement of facial aesthetics and result stability. It is necessary to develop individualized treatment plan with complete evaluation of patient's dental, facial and skeletal patterns to offer a correct diagnosis and proper treatment plan. We should respect the basic orthodontic principles of treatment planning and do not exceed the biological limitations according to the natural equilibrium.
Keywords: Class II malocclusion, Treatment planning, Treatment mechanics, Extractions.